Wire Wound Magnetically Shielded SMD Power Inductor (High Current)



2.0 x 1.6 x 1.0 mm

ASPI-2010HC

RoHS/RoHS II Compliant

FEATURES:

- Iron based core provides large saturation current
- Low DCR lowers power loss
- Magnetic-resin shielding reduces leakage flux and Electro Magnetic Interference (EMI)
- Metal core designed for excellent shock resistance
- Low profile package takes up little PCB space

APPLICATIONS:

- Smart Phone, Tablet, Notebook, Desktop, Server
- Blu-Ray Disc Recorder, Set Top Box
- Portable Gaming Device, Navigation Device

ELECTRICAL SPECIFICATIONS:

Abracon P/N:	ASPI-2010HC
Operating Temperature & Humidity	-40˚C ~ +125˚C (including self heating)
Storage Temperature & Humidity:	-10˚C ~ +40˚C and 70% R.H. max. (In tape and reel)

Part Number ASPI-2010HC- Inductance Code	Inductance	Inductance Tolerance	DC Resistance Max	Min. Self Resonant Frequency	Saturation Current Typ	Saturation Current Max	Temperature Rise Current Typ	Temperature Rise Current Max
Units	µH	%	Ω Max	MHz	A Typ	A Max	A Typ	A Max
Symbol	L	M		SRF Min	Isat		Irms	
ASPI-2010HC-R24	0.24	M	0.040	145	5.50	4.50	3.45	3.00
ASPI-2010HC-R47	0.47	M	0.049	102	4.70	4.00	3.10	2.70
ASPI-2010HC-R68	0.68	M	0.065	77	4.00	3.50	2.80	2.50
ASPI-2010HC-1R0	1.0	M	0.090	70	3.85	3.35	2.35	2.05
ASPI-2010HC-2R2	2.2	M	0.170	39	2.15	1.90	1.70	1.45
ASPI-2010HC-100	10	M	0.826	15	0.95	0.80	0.75	0.65

Test Conditions:

a. Ambient Temperature: 20± 15°C
b. Relative Humidity: 65%±20%
c. Air Pressure: 86KPa to 106KPa

Inductance (L): WK3260B LCR meter or equivalent, 1MHz, 1V.
Direct Current Resistance (DCR): HIOKI 3540 or equivalent.
Saturation Current (Isat): WK3260B LCR meter or equivalent.
Temperature rise current (Irms): Electric Power, Electric current meter, Thermometer.
Saturation Current Max: DC current at which the inductance drops less than 30% from its value without current.
Saturation Current Typ: DC current at which the inductance drops approximate 30% from its value without current.
Irms: DC current that causes the temperature rise (ΔT) from 20°C ambient.
ΔT＜40°C for Irms max; ΔT is approximate 40°C for Irms typ.

OPTIONS AND PART IDENTIFICATION

ASPI-2010HC- ☐ ☐ - ☐

Inductance Code	Tolerance	Packaging
Please refer to the table above	M: ±20%	T: Tape and Reel (2kpcs / reel)

30332 Esperanza, Rancho Santa Margarita, California 92688
tel 949-546-8000 | fax 949-546-8001 | www.abracon.com

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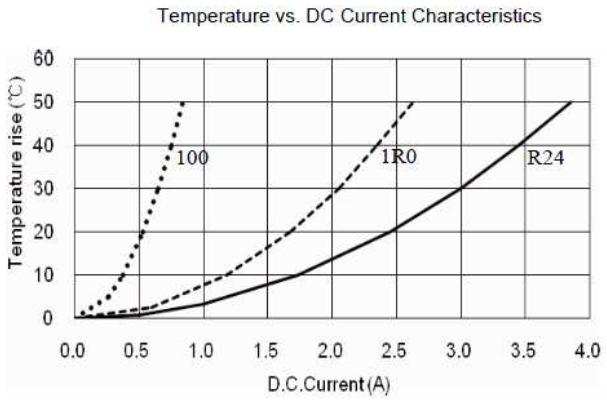


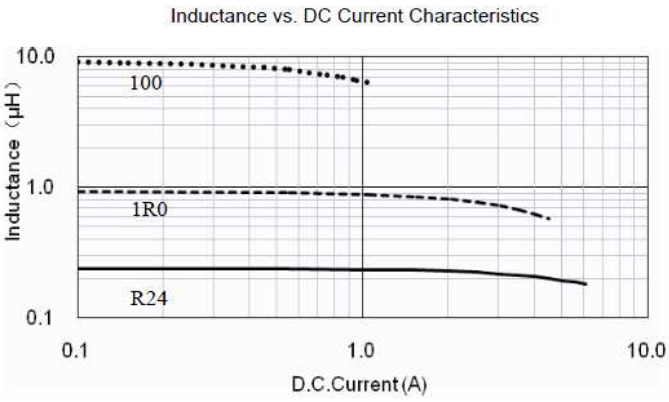
2.0 x 1.6 x 1.0 mm

ASPI-2010HC

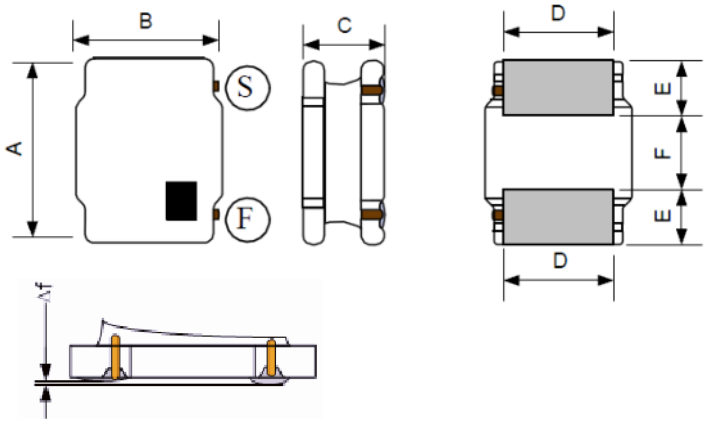
RoHS/RoHS II Compliant

ELECTRICAL CHARACTERISTICS CURVES

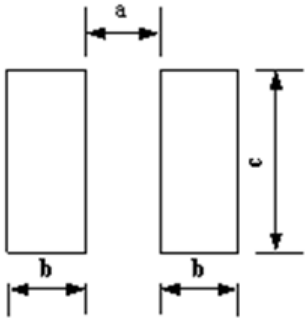




OUTLINE DIMENSIONS:



Recommended Land Pattern

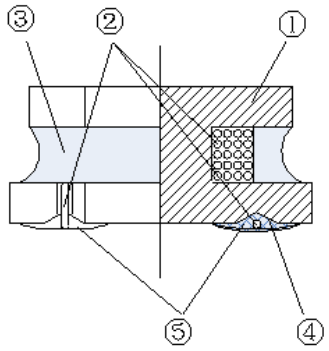


Δf: Clearance between terminal and the surface of plate must be 0.1mm max when coil is placed on a flat plate.

A	B	C Max.	D	E	F	a Typ.	b Typ.	c Typ.
2.0±0.2	1.6±0.2	1.0	1.2±0.2	0.60±0.2	0.80±0.2	0.70	0.70	1.70

Dimensions: mm

Materials



No	Components	Material
1	Core	Soft magnetic metal
2	Wire	Polyurethane system enameled copper wire
3	Magnetic Glue	Epoxy resin and magnetic powder
4	Substrate	FeNiCu/Ag
5	Top Electrodes	Sn alloy

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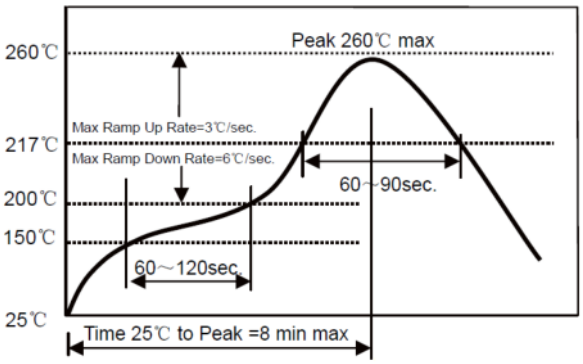


2.0 x 1.6 x 1.0 mm

ASPI-2010HC

Pb RoHS/RoHS II Compliant

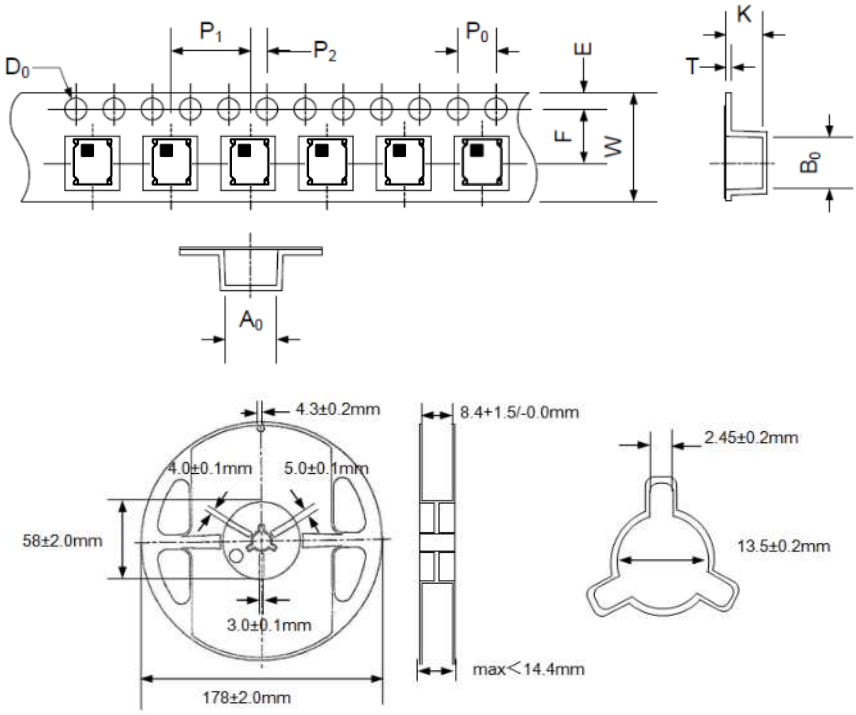
REFLOW PROFILE:



Δ Preheat condition: 150 ~200˚C /60~120sec.
Δ Allowed time above 217˚C: 60~90sec.
Δ Max temp: 260˚C
Δ Max time at max temp: 5sec.
Δ Solder paste: Sn/3.0Ag/0.5Cu
Δ Allowed Reflow time: 2x max

TAPE & REEL:

T: 2,000pcs / reel



Ao	Bo	W	E	F	Po	P_1	P_2	Do	T	K
1.90±0.05	2.20±0.05	8.0±0.1	1.75±0.1	3.5±0.05	4.0±0.1	4.0±0.1	2.0±0.05	1.5+0.1/-0.0	0.25±0.02	1.20±0.05

Storage Conditions

a. To maintain the solderability of terminal electrodes and to keep the packing material in good condition, temperature and humidity in the storage area should be controlled.
b. Recommended conditions: -10°C ~ +40 °C, 70% RH (Max.)
c. Even under ideal storage conditions, solderability of products electrodes may decrease as time passes. For this reason, product should be used within one year from the time of delivery.
d. In case of storage over 6 months, solderability shall be checked before actual usage.

Dimension: mm

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